

## CONTENTS

S. AIELLO, B. BARSELLA and C. CECCHI-PESTELLINI - Introduction	page	IX
1. CLOUDS		
S. CASU, C. CECCHI-PESTELLINI, F. SCAPPINI and P. BENVENUTI – The cloud complex in front of Cygnus OB2 No.12.....	"	3
L. CAMPEGGIO, F. STRAFELLA, S. AIELLO, C. CECCHI-PESTELLINI and S. PEZZUTO – Observational characteristics of a Bok Globule in the optical region .....	"	15
F. STRAFELLA, L. CAMPEGGIO and D. ELIA – Internal structure of dark clouds: An observational approach .....	"	23
2. STAR FORMATION		
F. PALLA – Star formation in space and time in the Taurus-Auriga association .....	"	35
T. GIANNINI, B. NISINI and D. LORENZETTI – Far infrared line emis- sion in young protostars .....	"	45
B. NISINI, T. GIANNINI, D. LORENZETTI and F. VITALI – Star formation-molecular cloud interaction: An infrared spectroscopic view.....	"	53
L. TESTI – Hot molecular cores and the formation of massive stars..	"	61
3. DUST AND MOLECULES IN SPACE		
P. CASELLI, M. WALMSLEY and A. ZUCCONI – Gas and dust in a prestellar core .....	"	71
A. ZUCCONI, C.M. WALMSLEY and D. GALLI – Dust temperature in starless cores.....	"	83
I. PORCEDDU – Surfing on DIBs beyond the diffuse matter .....	"	93
G. MALLOCI, G. MULAS, G. CAPPELLINI, G. SATTA, I. PORCEDDU and P. BENVENUTI – <i>Ab initio</i> study for possible DIBs carriers..	"	101
R. SAJIA, M. A. IATÌ, F. BORGHESE, P. DENTI, S. AIELLO and C. CECCHI-PESTELLINI – Beyond Mie theory in interstellar dust modelling .....	"	111
4. DUST AND MOLECULES IN LABORATORY		
G. DE MARIA – Thermodynamic stability and reactivity of high tem- perature refractory molecules of astrophysical interest.....	"	121

G. MANICÒ, V. PIRRONELLO, G. RAGUNÌ J. E. ROSER and G. VIDALI – Molecules “on the rocks”: Surface reactions on astrophysical ices.....	page	133
G. A. BARATTA, G. LETO and M. E. PALUMBO – <i>IN SITU</i> infrared spectroscopy of ion and UV irradiated astrophysically relevant ices .....	“	143
M. E. PALUMBO, G. A. BARATTA, G. FERINI, F. SPINELLA and G. STRAZZULLA – The formation of C≡N bonds after ion irradiation of icy mixtures .....	“	151
V. MENNELLA, J. R. BRUCATO, L. COLANGELI and P. PALUMBO – The evolution of the organic compounds in the interstellar medium .....	“	159
A. BLANCO, V. OROFINO, S. FONTI, F. DE CARLO, A.C. MARRA, G. MARZO and R. POLITI – Laboratory studies of carbonate grains and applications to Martian spectra .....	“	169
<b>5. SPACE AND INSTRUMENTATION</b>		
G. G. C. PALUMBO – Astrobiology a new programme in the Italian Space Agency .....	“	181
L. COLANGELI, R. BATTAGLIA, J.R. BRUCATO, E. BUSSOLETTI, V. DELLA CORTE, F. ESPOSITO, G. FERRINI, E. MAZZOTTA EPIFANI, V. MENNELLA, E. PALOMBA, P. PALUMBO and A. ROTUNDI – Solar System exploration: The identification of primordial materials .....	“	185
V. NATALE – Herschel Space Observatory .....	“	197
P. PERSI, M. BUSO, L. CORCIONE, M. FERRARI-TONIOLO and A. R. MARENZI – TIRCAM2: A mid-IR camera for astrophysical observations .....	“	205
<b>6. FROM SPACE TO EARTH — ASTROCHEMISTRY AND ORIGIN OF LIFE</b>		
R. FABBRI, M. TUCCI, M. BRUSCOLI, V. NATALE, E. CARRETTI, S. CECCHINI and S. CORTIGLIONI – Polarization of the diffuse background radiation in the cosmological window .....	“	217
E. GALLORI and M. FRANCHI – From space chemicals to earth life .....	“	225
List of participants .....	“	233